

Work Order ID 127646

December-17-14 1:41:51 PM

127646

Page 1

Item ID: D6101-007 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Saddle Billet
 Start Date: 12/17/14 Start Qty: 13.00 ²⁰
 Required Date: 12/17/14 Req'd Qty: 13.00 ~~*13*~~
 Reference: ~~*13*~~ Cust Item ID:
 Customer:

Approvals: Process Plan: C2 Date: 14/12/23 Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D6101	Rev B

100	PURCHASING	0.00							
100									
Purchasing	Memo	0.00							
Purchasing	Issue P/O: <u>27023</u>								
	a) Description: Alluminum billet								
	b) 7.750" x 8.250" x 2.50" thick								
	c) Tolerance on all dimensions are +0.030"/-0.000"								
	d) Grain direction along 7.750" length								
	e) Material: 7075-T7351 (QQ-A-250/12)								
	f) Material certification required								

110	Receive & Inspect for Damage & Mat'l Certs	0.00							
110									
Packaging	Memo	0.00							
Packaging	Ensure material certification is attached								

C2 15/01/12 20

20x 8P15-01-26

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube ☐</td> <td>Crosstube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>	Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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Large Fab ☐	Composite ☐	Supplier ☐																

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence	☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge ☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other
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Item ID: D6101-007 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Saddle Billet
 Start Date: 12/17/14 Start Qty: 13.00 ***13*** Cust Item ID:
 Required Date: 12/17/14 Req'd Qty: 13.00 ***13*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120	QC6- Inspect dimensions to drawing	0.00							DAS 14 9-89
120						20	0		
QC	Memo	0.00							
Quality Control	Ensure Material certification comply to Dwg D6101								

130	Identify as per dwg & Stock Location: <u>MATCH</u>	0.00							DAS 14 9-89
130						20	0		
Packaging	Memo	0.00							
Packaging									

140	QC21- Final Inspection - Work Order Release	0.00							
140									
QC	Memo	0.00							
Quality Control									

15/1/28 *[Signature]*
 MF
 5-1-27

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube ☐</td> <td>Crosstube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>	Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐															
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Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence
		☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge
		☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other

Picklist Print

December-17-14 1:41:51 PM

Page 1

Work Order ID: 127646

127646

Parent Item: D6101-007

D6101-007

Parent Item Name: Saddle Billet

Start Date: 12/17/14

Required Date: 12/17/14

Start Qty: 13.00

Required Qty: 13.00

Comments: IPP A: 01.05.04New IssueEC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
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D6101-007P

Purchased

No

110

Each

0.0000

1

D6101-007P

7075-T7351 8.25X7.75X2.5

13-20 ✓

20 x 8015-01-26

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

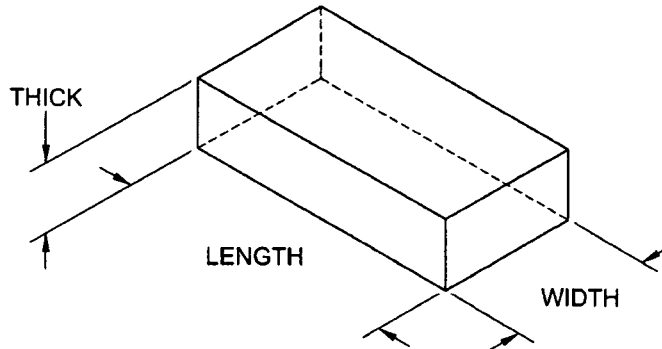
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SPECIFICATION CONTROL DRAWING



PURCHASE MATERIAL ACCORDING TO THE FOLLOWING TABLE. SPECIFY ALLOY, LENGTH x WIDTH x THICK (+0.030/-0.000), AND GRAIN DIRECTION AS SHOWN.

TOLERANCES ON ALL DIMENSIONS ARE +0.030/-0.000.

ALL DIMENSIONS ARE IN INCHES.

B ACCEPTABLE SPECIFICATIONS FOR 7075-T7351 ALUMINUM ARE AMS-QQ-A-250/12, QQ-A-250/12, OR ASTM B209

Part No.	Alloy	Length	Width	Thick	Grain Direction
D6101-001	7075-T7351 (QQ-A-250/12)	6.000	6.250	2.000	Along 6.000 Length
D6101-003	7075-T7351 (QQ-A-250/12)	7.875	6.250	2.000	Along 7.875 Length
D6101-005	7075-T7351 (QQ-A-250/12)	5.000	8.250	2.500	Along 5.000 Length
D6101-007	7075-T7351 (QQ-A-250/12)	7.750	8.250	2.500	Along 7.750 Length
D6101-009	7075-T7351 (QQ-A-250/12)	8.700	8.250	2.500	Along 8.700 Length
D6101-011	7075-T7351 (QQ-A-250/12)	9.700	8.250	2.500	Along 9.700 Length
D6101-013	7075-T7351 (QQ-A-250/12)	10.100	8.250	2.500	Along 10.10 Length
D6101-015	7075-T7351 (QQ-A-250/12)	9.450	6.250	2.500	Along 9.450 Length
D6101-017	7075-T7351 (QQ-A-250/12)	6.350	6.250	2.250	Along 6.350 Length

B

CL4412123
W/O. 127646

RELEASED
09/07/15/WB

B	ADDED D6101-015/-017, ADD ASTM B209	RF	09.04.23
A	NEW ISSUE	CP	01.03.30
REV.	DESCRIPTION	BY	DATE
DESIGN	CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. B
MFG. APPR.	<i>[Signature]</i>	D6101	SHEET 1 OF 1
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	SADDLE BILLET, 7075	NTS
DATE	09.04.23	COPYRIGHT © 2001 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO27023**

Purchase Order Date 1/12/2015

PO Print Date 1/12/2015

Page Number 1 of 2

Order From :

VU-THY001

THYSSENKRUPP MATERIALS CA LTD
O/A VPK METAL
C/O T27540
PO BOX 4275 POSTAL A
TORONTO, ON M5W 5V8
CANADA

Ship To : DART AEROSPACE LTD

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

FAKED

Contact Name

Vendor Phone 905-669-9444

Ship To Contact

Ship To Phone

Ship Via: Yours ppd

Ship Acct:

Buyer

Chantal Lavoie

Customer POID

Customer Tax #

10127-2607

Terms

Net 30

Currency

USD

FOB

DDP - (Delivered Duty Paid)

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
1	D6101-007P	7075-T7351 8.25X7.75X2.5	1/23/2015 Yes 1/23/2015		20.00 Each	\$78.25	\$1,565.00
AS PER DWG D6101 REV. B B127646 MATERIAL: 7075-T7351 (QQ-A-250/12) SIZE: 7.750" X 8.250" X 2.50" THICK GRAIN DIRECTION ALONG: 7.750" LENGTH TOLERANCE AS PER QUOTE +0.060"/-0.000"							
Line Total:							\$1,565.00
2	D6101-015P	ALUM BILLET	1/23/2015 Yes 1/23/2015		10.00 Each	\$77.20	\$772.00
AS PER DWG D6101 REV. B B127518 size: 9.450" X 6.250" X 2.50" thick Tolerance on all dimensions are +0.060"/-0.000" Grain direction along 9.450" length Material: 7075-T7351 (QQ-A-250/12)							

8815-01-26

Note:

1/12/2015

BILL OF LADING

Ship From:
THYSSENKRUPP MATERIALS NA
2821 LANGSTAFF ROAD
CONCORD, ONTARIO L4K 5C6
Tel: 905-669-9444 Fax: 905-738-9033

No: PEC 915151
Ship Date: 26Jan15 at 14:55 From PFW -
Probill
Via: VIM TRANSFER
FOB: CONCORD
Frt: PREPAID
Route: 0-0 Manifest
Vehicle: Trailer
Slp: CARMELA AGNIHOTRI (905-5321422)
Sold To: (20115)
DART AEROSPACE
1270 ABERDEEN ST
HAWKESBURY, ON K6A 1K7

Ship To: (1)
DART AEROSPACE
1270 ABERDEEN ST
HAWKESBURY, ON K6A 1K7
Tel: 613-632-9577 Fax: 613-632-1053

BILL OF LADING

1) Our Order PEC-758903-1 Your PO # PO27023
Part # D6101-007 Rel #
ALUMINUM PLATE 7075T7351
2.50" THICK X 8.2500" X 9.7500"
PLEASE NOTE GRAIN DIRECTION ALONG 7.750 INCH DIM
DOMESTIC MATERIAL

SP15-07-26 MTR

Heat Number	Tag No	Quantity	PCS	Wt LBS
9301167	372346	8.88 SFT	20	325

2) Our Order PEC-758903-2 Your PO # PO27023
Part # D6101-015 Rel #
ALUMINUM PLATE 7075T7351
2.50" THICK X 8.2500" X 9.4500"
PLEASE NOTE GRAIN DIRECTION ALONG 9.450 INCH DIM
DOMESTIC MATERIAL
5 PCS B/O

Heat Number	Tag No	Quantity	PCS	Wt LBS
9301167	372354	2.05 SFT	5	75

Tags	PCS	LBS
2	25	400

TOTAL

SHIP AS SOON AS IT ARRIVES

MILL TEST REPORTS, PACKING SLIPS ARE TO SENT
WITH MATERIAL AND FAXED TO THE CUSTOMER PRIOR
TO SHIPPING
ATTN: CHANTAL/LINDA

Page 1 ... Continued

ALUMINUM - LAITON - CUIVRE - PLASTIQUE - ACIER INOX
ALUMINUM - BRASS - COPPER - PLASTICS - STAINLESS

TOUTES ERREURS ET/OU MARCHANDISES MANQUANTES DOIVENT ÊTRE
RAPPORTÉES IMMÉDIATEMENT

ERRORS OR SHORTAGE MUST BE REPORTED IMMEDIATELY

RETOUR DE MARCHANDISES AVEC NOTRE NUMERO D'APPROBATION SEULEMENT
MERCHANDISE MAY NOT BE RETURNED WITHOUT OUR APPROVAL NUMBER

Sylvia Rose

B I L L O F L A D I N G

Ship From:
 THYSSENKRUPP MATERIALS NA
 2821 LANGSTAFF ROAD
 CONCORD, ONTARIO L4K 5C6
 Tel: 905 669 9444 Fax: 905-738-9033

No: PEC 915151
 Ship Date 26Jan15 at 14:55 From PFW
 Probill
 Via VIM TRANSFER
 FOB CONCORD
 Frt PREPAID
 Route 0- 0 Manifest
 Vhcle Trailer
 Slp CARMELA AGNIHOTRI(905-5321422)
 Sold To: (20115)
 DART AEROSPACE

Ship To: (1)
 DART AEROSPACE

B I L L O F L A D I N G

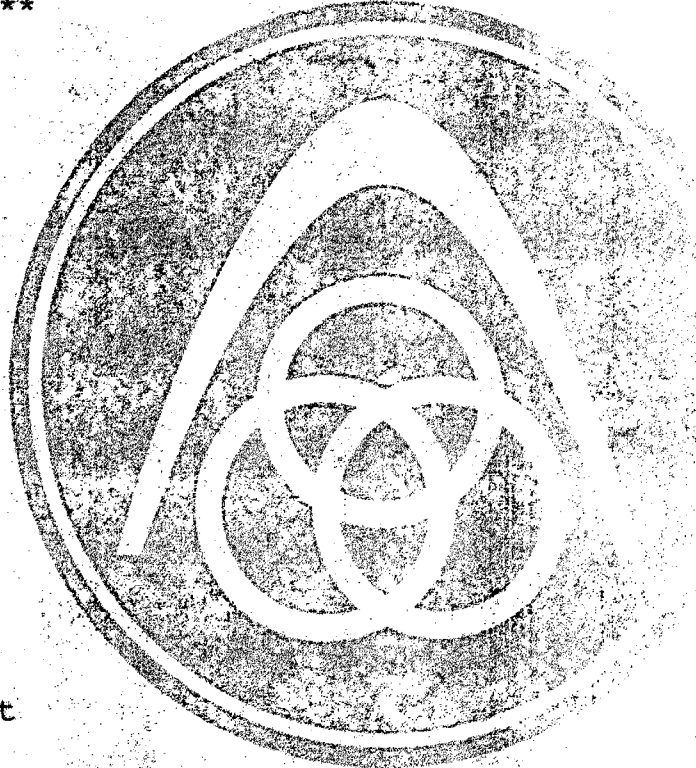
** ALL PACKING SLIPS MUST HAVE THE HEAT NUMBER **
 ** REFERENCED ON IT **

TOTAL 2 SKIDS GW. 463 LBS

*CUSTOMER PICK-UP HRS AT THYSSENKRUPP MATERIALS NA
 CONCORD, ONT.* *** 9:00 AM TO 4:00 PM ***
 **** TEL. 800-926-2600 ****

 * WE STOCK STAINLESS STEEL *
 * PLEASE LET US QUOTE YOUR NEXT REQUIREMENT *

 ***PLEASE NOTE A \$25.00 ENERGY SURCHARGE WILL BE
 ADDED TO EVERY ORDER.***



Page: 2 Last

ALUMINIUM • LAITON • CUIVRE • PLASTIQUE
 ALUMINUM • BRASS • COPPER • PLASTIC

TOUTES ERREURS ET/OU MARCHANDISES MANQUANTES DOIVENT ETRE
 RAPPORTEES IMMEDIATEMENT
 ERRORS OR SHORTAGE MUST BE REPORTED IMMEDIATELY
 RETOUR DE MARCHANDISES AVEC NOTRE NUMERO D'APPROBATION SEULEMENT
 MERCHANDISE MAY NOT BE RETURNED WITHOUT OUR APPROVAL NUMBER



Constellium



CERTIFIED TEST REPORT
Constellium Rolled Products
Ravenswood, LLC

1

S
H
I
P

T
O

COPPER & BRASS SALES, INC.

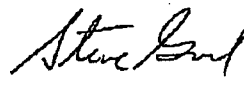
5 STERLING DRIVE
WALLINGFORD CT
06492
US

S
O
L
D

T
O

COPPER & BRASS SALES

PO BOX 5116
SOUTHFIELD MI
48086
US

COPPER&BR		110263225		4776		INCLUSION		Serial:20141128-0110263225		Pg 1of2	
CUSTOMER PURCHASE ORDER NO. & ITEM 5400230740						Constellium ORDER NO. A050840025					
ALLOY 7075	CLAD	TEMPER T7351	GAUGE 2.50000 in	WIDTH 48.50000 in	LENGTH 144.50000 in		CERTIFICATION "Constellium Rolled Products, hereby certifies that metal shipped under this order has been inspected and found in conformance with the requirements of the applicable specifications as indicated herein. Any warranty is limited to that shown on Constellium Rolled Products' standard General Terms and Conditions of Sales. Test reports are on file, subject to examination." Constellium Rolled Products Ravenswood, LLC 859 Century Road P.O. BOX 68 RAVENSWOOD, WV 26164 USA  Steve Good - Laboratory Manager				
ITEM ORDERED SPEC PLATE, SAWED MILL FINISH											
CUSTOMER SPECIFICATION EAC-MS1011E											
PART NUMBER ALFLR00249			B/L NUMBER 33056		DATE SHIPPED 11/28/2014						
WT. SHIPPED 3560.000 LB		NO. OF PIECES 000002		GOVT. CONTRACT NO.							

ALL LOTS ON THIS CERTIFICATION CONFORM TO THE FOLLOWING REQUIREMENTS:

ASTM B594 REV 13 2013 100% SONIC Class A
 AMS QQ-A-250/12A
 AMS STD-2154A 2012 TYPE1 CLASS A 100% SONIC MINUS DEADZONE
 AMS 4078J
 ASTM B209-10
 BSS-7055B 2013 CLASS A 100% SONIC TESTED MINUS DEADZONE
 DPS 4.713 REV AK 2012 CLASS A 100% SONIC MINUS DEADZONE
 GAMPS 9101 REV B 2006 CLASS A 100% SONIC MINUS DEADZONE
 MMS 159T
 PS-21211M 2010 CLASS A 100% SONIC MINUS DEADZONE

OK 15/01/27
DAS
14
9-89

Load Details

Package	Net Lbs	Kg	Lot	Piece	Serial	Parent Lot
1000940403	3,560.000	1,614.788	9301167	03		
1000940403	3,560.000	1,614.788	9301167	04		

Lot: 9301167

Tensile Test (US)

		Ultimate (KSI)		Yield (KSI)		Elongation (%)	
Direction	Tests	Min	Max	Min	Max	Min	Max
LT	02	74.1	74.4	64.1	64.3	11.5	11.5

Tensile Test (SI)

		Ultimate (N/MM2)		Yield (N/MM2)		Elongation (%)	
Direction	Tests	Min	Max	Min	Max	Min	Max
LT	02	511	513	442	443	11.5	11.5

From: P-890-1552 REVISED 10 2014
 ThyssenKrupp Materials NA

Cust. THYSSENKRUPP MATERIALS NA - ECAD Del.: 2403609125

CstAr D6101-007P

CstOr 264133

Wgt.: 324.785 LB

Date 01/16/2015

SP 15-01-26

John L. Zambetti



Constellium



CERTIFIED TEST REPORT
Constellium Rolled Products
Ravenswood, LLC

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COPPER & BRASS SALES, INC.

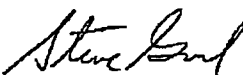
5 STERLING DRIVE
WALLINGFORD CT
06492
US

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COPPER & BRASS SALES

PO BOX 5116
SOUTHFIELD MI
48086
US

COPPER&BR		110263225		4776		INCLUSION		Serial:20141128-0110263225		Pg 2of2	
CUSTOMER PURCHASE ORDER NO. & ITEM 5400230740						Constellium ORDER NO. A050840025					
ALLOY 7075	CLAD	TEMPER T735	GAUGE 2.50000 in	WIDTH 48.50000 in	LENGTH 144.50000 in		CERTIFICATION "Constellium Rolled Products, hereby certifies that metal shipped under this order has been inspected and found in conformance with the requirements of the applicable specifications as indicated herein. Any warranty is limited to that shown on Constellium Rolled Products' standard General Terms and Conditions of Sales. Test reports are on file, subject to examination." Constellium Rolled Products Ravenswood, LLC 859 Century Road P.O. BOX 68 RAVENSWOOD, WV 26164 USA  Steve Good - Laboratory Manager				
ITEM ORDERED SPEC PLATE, SAWED MILL FINISH											
CUSTOMER SPECIFICATION EAC-MS1011E											
PART NUMBER ALFLR00249			B/L NUMBER 33056		DATE SHIPPED 11/28/2014						
WT. SHIPPED 3560.000 LB		NO. OF PIECES 000002		GOVT. CONTRACT NO.							
Conductivity						% IACS MIN 40.2 MAX 40.4 % MS/M MIN 23.3 MAX 23.4					
Chemistry (Actual)						DAS 14 9-89					
	SI	FE	CU	MN	MG	CR	ZN	TI	ZR		
Core	0.10	0.11	1.51	0.03	2.52	0.21	5.50	0.03	0.01		
OTHERS-EACH: .05 MAX. OTHERS TOTAL: .15 MAX. AL REMAINDER											
All material contained in this lot was cast and manufactured in the USA											
QUALITY TEXTS: ALFLR00249											
THIS TEST REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF THE LABORATORY OR AUTHORIZED QUALITY DELEGATE. THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THE CERTIFICATE MAY BE PUNISHED AS A FELONY UNDER FEDERAL LAW. CHEMISTRY BY OES: ARKSPARK CHEMISTRIES REPORTED IN PERCENTAGE BY WEIGHT WHEN FRACTURE TOUGHNESS TEST REQUIRED, TESTED PER ASTM E399 WHEN TENSILE TEST REQUIRED, TESTED PER ASTM E8; B557 DUNS Number: 090570149; CAGE Code: 1YW19 Mercury is not a normal contaminant in aluminum alloys and neither mercury nor any of its compounds were utilized in the manufacture of our product. "END OF CERTIFICATION"											

From: P-060-1550 REVISED 10/2014 ThyssenKrupp Materials NA

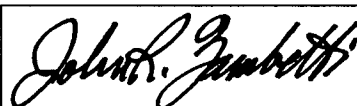
Cust. THYSSENKRUPP MATERIALS NA - ECAD Del.: 2403609125

CstAr D6101-007P

CstOr 264133

Wgt.: 324.785 LB

Date 01/16/2015



MATERIAL RECEIPT INSPECTION FORM

MATERIAL: D6101-007
 RECEIVED BY: 25023 Soria P
 DATE: 15/01/26
 P/O# 27027
 QUANTITY ORDERED: 13
 THICKNESS ORDERED: 7.750x8.250x2.50
 SHEET SIZE: _____
 MATERIAL CERT RECEIVED: yes
 QUANTITY RECEIVED: 20
 THICKNESS RECEIVED: 7.750x8.250x2.50
 SHEET SIZE RECEIVED: _____

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y ☒	
INCORRECT FINISH	Y ☒	
CORROSION	Y ☒	
INCORRECT GRAIN DIRECTION	Y ☒	
INCORRECT MATERIAL	Y ☒	
INCORRECT THICKNESS	Y ☒	
PHOTO REQUIRED	Y ☒	
CORRECT MATERIAL	☒ N	
CORRECT REF # TO LINK CERT	☒ N	
CORRECT MATERIAL IDENTIFICATION	☒ N	
CORRECT M# ON THE MATERIAL	☒ N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y ☒	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y ☒	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
TYPE OF MATERIAL	HRC	HRB	DUR A	DUR D	
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION		ENGINEERING SIGNOFF (if required)	
INSPECTED BY: <u>DM</u>	DAS	BY: _____	
DATE: <u>15/01/27</u>	14	DATE: _____	
		9-89	

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

MATERIAL RECEIPT INSPECTION FORM

INSTRUCTIONS FOR INSPECTING BAR, TUBING, ROUND, & SHEET STOCK

- 1- VERIFY STOCK TO DART PURCHASES ORDER
- 2- MEASURE ALL DIMENSIONS FOR EACH PURCHASED STOCK
 - a. WIDTH, THICKNESS, DIAMETER, WALL THICKNESS & LENGTH
- 3- VERIFY CONDITION OF MATERIAL i.e. DAMAGED, CORRODED, etc.
- 4- VERIFY THAT SUPPLIER HAS A NUMBER (HEAT #) ON ITS RECEIVING REPORT TO LINK TO MATERIAL CERTS
- 5- VERIFY MATERIAL CERTS ARE CORRECT TO THE DART PO INSTRUCTIONS
- 6- REMOVE / CUT A PIECE OF MATERIAL FOR SAMPLE HARDNESS TESTING

INSTRUCTIONS FOR INSPECTING SKIDTUBE & STEP EXTRUSION

- 1- VERIFY TO DART SUPPLIED DRAWING
- 2- SAMPLE INSPECT MATERIAL IN BUNDLE TO ENSURE MATERIAL CAN BE RECEIVED INTO DART
- 3- USING PORTABLE HARDNESS TESTER VERIFY HARDNESS OF THE MATERIAL TO THE DRAWING
- 4- VERIFY THAT MATERIAL CERTS MATCH TO WHATS CALLED UP ON THE DART DRAWING

AFTER MATERIAL PASSES INSPECTION

- 5- HAVE DART EMPLOYEES START STOCKING MATERIAL BUT REQUEST MIN **20pcs** FOR FULL INSPECTION
- 6- INSPECT ALL DIMS AS PER DRAWING REQUIREMENTS

INSTRUCTIONS FOR INSPECTING CROSS TUBE MATERIAL

- 1- VERIFY MATERIAL CERTS MATCH THE REQUIREMENTS ON THE DART DRAWINGS
- 2- INSPECT MIN. HALF THE BATCH OF EXTRUSION RECEIVED INTO DART
- 3- INSPECT MATERIAL AS PER THE EXTRUSION REPORT
 - a. WALL THICKNESS USING ULTRA-SONIC IN 4 LOCATIONS
 - b. OUTSIDE DIAMETER HIGHEST/LOWEST BOTH ENDS
 - c. INSIDE DIAMETER HIGHEST/LOWEST BOTH ENDS
 - d. STRAIGHTNESS @ CENTER OVER 12" SPAN
 - e. WALL THICKNESS USING TUBE MICROMETER HIGHEST/LOWEST BOTH ENDS
- 4- IDENTIFY EACH TUBE IN SEQUENCE OF INSPECTING (TUBE 1, TUBE2.....) AND W/O# AND PO#
- 5- RECORD ALL FINDINGS ON EXTRUSION REPORT

IF ANY QUESTIONS PLEASE SEE QC COORDINATOR BEFORE GOING FURTHER